

MEMORANDUM

SUBJECT: Emission Inventories for Hazardous Air Pollutants (HAPs)
in the Aerometric Information Retrieval System (AIRS)

FROM: Robert G. Kellam, Acting Director
Technical Support Division, OAQPS (MD-14)

TO: See Addressees

Since the passage of the 1990 Amendments to the Clean Air Act (Act), we have thoroughly examined the Act for requirements or language to support a requirement for a national emission inventory program for hazardous air pollutants. Although there are several sections in the Act where statutory implementation would benefit or even indirectly depend upon such an inventory, no clear mandate exists under the Act for a complete national HAPs emission inventory. However, since there are obvious benefits, several States have indicated that they would support such an inventory. The State and Territorial Air Pollution Program Administrators and the Association of Local Air Pollution Control Officials (STAPPA/ALAPCO) and leaders of several individual State and local programs have encouraged the Environmental Protection Agency to support such an inventory effort.

Because there seems to be misinformation and misconceptions regarding the capabilities of AIRS for this purpose, this memorandum is intended to clarify these capabilities and to indicate support for a voluntary program on the part of the States to compile a national HAPs emission inventory in AIRS.

There are a number of needs for national HAPs data and their availability in a commonly accessible system. These include the following:

Great Waters Studies and Report to Congress - For a proper analysis of the sources of hazardous air pollutants impacting upon the Great Lakes and coastal waters, some quantification of the source and strength of emissions from a majority if not all of the country is needed. A national inventory for HAPs would

provide such a data base. Currently, an attempt at constructing a "best guess" inventory is being made using criteria emission inventories and piecemeal data from States and other sources. Any data in AIRS from States would directly enhance such efforts.

Urban Area Source Studies and Reports to Congress - This program needs to assess the impact of emissions from area sources in urbanized areas and prescribe an area source control program to reduce the risk from HAPs. This control program will supplement the Maximum Available Control Technology (MACT) program and its emphasis on major sources. The current inventory and analysis work is addressing only a limited number of urban areas due to the cost and extent of the efforts. A national inventory in part or in whole would provide a more rational basis for the application and follow-up efforts needed for this requirement, including demonstration that the goals of the national area sources strategy, are being met.

Photochemical Modeling - The modeling efforts for ozone nonattainment and many other areas involve the need to know speciation (for reactivity evaluation) of organic compounds. Speciation of organic compounds and quantification of HAPs, though far from synonymous, are mutually beneficial, and have some common information source and data compatibility aspects. A national inventory with speciation of data supplied by sources/States would certainly enhance both the ozone and HAPs programs.

Comparability to SARA 313 - A National inventory for HAPs would supplement, and could perhaps eventually reduce or eliminate, the need for the Superfund Amendment and Reauthorization Act (SARA) reporting requirement. One of the weaknesses of SARA is the lack of facility details. A national HAPs inventory in AIRS would provide these details and would allow these data bases to be cross-checked for better identification and tracking of potential pollutants, and sources as well as more comprehensive analysis.

MACT Applications - A number of needs of the MACT program would be facilitated via a national HAPs inventory effort. Tracking of the 12-percent floor, facilitation of a data base for residual risk analyses, identification of and tracking of sources subject to MACT, and other similar requirements point to a need for an inventory development and maintenance effort. Currently, these needs are being met on a fairly ad hoc basis, though options to develop other systems are being evaluated.

Specific Pollutants - The Act requires that categories and subcategories accounting for 90 percentum of the aggregate emissions for seven specific pollutants be subject to standards

within 10 years of enactment. To accomplish this requirement a national inventory of these seven HAPs is necessary. Currently, a "top down" approach is being used, but this would be greatly enhanced by site specific data and information.

The Airs Facility Subsystem (AFS) is capable of accepting emissions data for any pollutant. There is not currently a file of emission factors in AFS for HAPs or other non-criteria pollutants, however, which would facilitate the automatic calculation of emissions. It is not universally agreed that this capability is even desirable. Users may provide emission totals or input their own emission factors (being restricted to the same set of units as for criteria pollutants) by process unit, and the system will calculate and store emission totals, allowing one to run all of the standardized AIRS reports and output formats. The input of HAPs or other chemicals will require, of course, that the basic source inventory data such as name, address, facility identification, point and segment identifiers, etc. be in the file. Process rates and other information in AIRS should be unchanged for sources that exist already for criteria pollutants, assuming those data are complete and in the same units. The attached write-up from a recent AIRS Newsletter addresses the process and limitations for using AIRS to input, store, and report emissions data for other than criteria pollutants.

In summary, there are a number of advantages to including HAPs and other speciated compounds in routine emission inventory efforts. The existing AIRS system will accommodate these data and provide convenient access for interested programs. We would appreciate your support in encouraging State and local agencies to voluntarily submit their HAPs and otherwise speciated inventories to AIRS on a routine basis and to use its capabilities for their own needs. Although we do not have any new resources for these activities, and the data and submittals for ozone and PM-10 SIPs remain a top priority, the Technical Support Division will continue to support updates of data into the system, whether criteria or HAPs, and respond to needs and improvements that may be identified. We ask that you make the appropriate personnel in each State aware of the needs and opportunities of this effort and provide us with your and their reactions.

Attachment

Addressees:

Director, Air Management Division, Region I
Director, Air and Waste Management Division, Region II
Director, Air, Radiation, and Toxics Division, Region III
Director, Air, Pesticides, and Toxics Management Division, Region IV
Director, Air and Radiation Division, Region V

Director, Air, Pesticides, and Toxics Division, Region VI
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